Analysis of Sugar-Sweetened Beverage Purchases by Supplemental Nutrition Assistance Program (SNAP) Participants

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BACKGROUND

The Supplemental Nutrition Assistance Program (SNAP) provides millions of low-income households supplemental income to purchase healthful food. Under current rules, SNAP allows the majority of food products, including sugar-sweetened beverages (SSBs), to be purchased using SNAP benefits. The ability to purchase SSBs using SNAP benefits has become an issue of public interest. SSB consumption is linked to obesity, diabetes, and other negative health outcomes. Research findings on differences in SSB consumption by SNAP participants and non-SNAP participants have been mixed.

This study examines the differences of item level SSB purchases between three groups: SNAP households SNAP transactions, SNAP households non-SNAP transactions, and non-SNAP households. The data consists of beverage transactions at various venues of nearly 26.5 million households captured from January 1 through December 31, 2011 across 32 states.

RESEARCH QUESTIONS

- What are the top 10 purchased beverages between SNAP households SNAP transactions, SNAP households non-SNAP transactions and non-SNAP household?
- How do the three groups differ on the percentage of annual expenditures on SNAP eligible beverages and SSBs?

METHODS

Data Sources

- The beverage data were acquired from a large retailer. It contains POS transactions from January 1, 2011 through December 31, 2011 across approximately 11 million SNAP households.

Measures

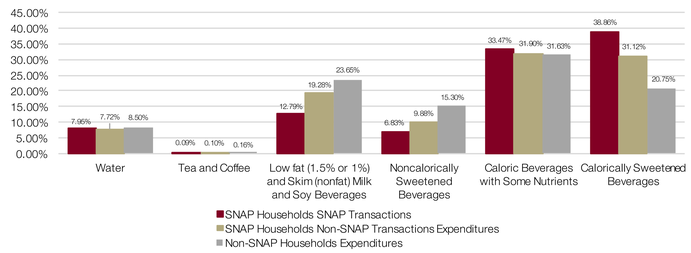
- SSB is operationalized as any beverage with added caloric sweeteners.
- SNAP transactions are operationalized as those for which a SNAP EBT card was the majority tender. Non-SNAP transactions are identified by usage of another form of payment for at least half of the purchases.
- The unit of analysis for this study is transaction dollar amounts spent on the item-level UPC code. Thus, the study compares monetary transactions in dollars for 234 SSB UPCs by households.

Limitations

- It was limited to three regions: West, Midwest, South.
- The data was limited to one grocery retailer.
- Characteristics were collapsed into expenditure, limiting the ability to create predictive modelling.

RESULTS

Percentage of all Beverage Expenditure by Beverage Guidance Category and Household Type



Top 10 Beverage Purchases, SNAP Households, SNAP Purchases

Rank	Subcommodity	Description	Total Dollar Amount	Grams of Sugar per 100 ml	Beverage Guidance Category
1	FLUID MILK/WHITE ONLY	STORE GENERIC VITAMIN D MILK	$22,753,388.93	4.65	Caloric Beverages with some nutrients
2	FLUID MILK/WHITE ONLY	STORE GENERIC LOWFAT 2% PLAS	$22,645,064.55	4.65	Nonfat or Low Fat or Milk Substitutes
3	STILL WATER DRNKING/MNRL WATER	STORE GENERIC PUR WTR-24PK/16.9 OZ	$14,692,765.20	0	Water
4	**SOFT DRINKS 12/18&15PK CAN CAR**	**COKE CLSC FRIDGE 12PK CAN**	**$12,976,373.73**	**10.99**	**Calorically Sweetened Beverages**
5	**SOFT DRINKS 12/18&15PK CAN CAR**	**PEPSI-COLA FRIDGE MATE**	**$8,658,085.88**	**11.55**	**Calorically Sweetened Beverages**
6	**SOFT DRINKS 12/18&15PK CAN CAR**	**MOUNTAIN DEW FRDG MT 12PK**	**$6,960,516.28**	**13.52**	**Calorically Sweetened Beverages**
7	**SOFT DRINKS 12/18&15PK CAN CAR**	**DR PEPPER CAN 12PK**	**$5,777,076.38**	**11.27**	**Calorically Sweetened Beverages**
8	**SOFT DRINKS 12/18&15PK CAN CAR**	**SPRITE FRIDGE 12PK**	**$4,998,225.06**	**11.17**	**Calorically Sweetened Beverages**
9	**SOFT DRNK 2 LITER BTL CARB INCL**	**PEPSI 2LT**	**$4,744,356.01**	**11.83**	**Calorically Sweetened Beverages**
10	**SOFT DRINKS 20PK&24PK CAN CARB**	**PEPSI CAN 24PK**	**$4,047,474.63**	**11.55**	**Calorically Sweetened Beverages**

Top 10 Beverage Purchases, SNAP Households Non-SNAP Transactions

Rank	Subcommodity	Description	Total Dollar Amount	Grams of Sugar per 100 ml	Beverage Guidance Category
1	FLUID MILK/WHITE ONLY	STORE GENERIC LOWFAT 2% PLAS	$21,945,189.75	4.65	Nonfat or Low Fat or Milk Substitutes
2	FLUID MILK/WHITE ONLY	STORE GENERIC VITAMIN D MILK	$14,927,422.17	4.65	Caloric Beverages with some nutrients
3	STILL WATER DRNKING/MNRL WATER	STORE GENERIC PUR WTR-24PK/16.9 OZ	$9,367,748.50	0	Water
4	**SOFT DRINKS 12/18&15PK CAN CAR**	**COKE CLSC FRIDGE 12PK CAN**	**$8,244,027.95**	**10.99**	**Calorically Sweetened Beverages**
5	**SOFT DRINKS 12/18&15PK CAN CAR**	**PEPSI-COLA FRIDGE MATE**	**$4,631,954.53**	**11.55**	**Calorically Sweetened Beverages**
6	FLUID MILK/WHITE ONLY	STORE GENERIC LOW FAT MILK 2% PLSTC	$4,140,168.69	4.65	Nonfat or Low Fat or Milk Substitutes
7	**SOFT DRNK 2 LITER BTL CARB INCL**	**PEPSI 2LT**	**$3,955,739.45**	**11.83**	**Calorically Sweetened Beverages**
8	**SOFT DRNK 2 LITER BTL CARB INCL**	**COKE CLASSIC CONT BTL 2LT**	**$3,473,331.31**	**10.99**	**Calorically Sweetened Beverages**
9	FLUID MILK/WHITE ONLY	MTN DAIRY 2% RED FAT MILK	$3,394,275.95	4.65	Nonfat or Low Fat or Milk Substitutes
10	FLUID MILK/WHITE ONLY	STORE GENERIC VIT D MILK	$3,249,156.61	4.65	Calorically Sweetened Beverages

Top 10 Beverage Purchases, Non-SNAP Households

Rank	Subcommodity	Description	Total Dollar Amount	Grams of Sugar per 100 ml	Beverage Guidance Category
1	FLUID MILK/WHITE ONLY	STORE GENERIC LOWFAT 2% PLAS	$143,663,217.21	4.65	Nonfat or Low Fat or Milk Substitutes
2	STILL WATER DRNKING/MNRL WATER	STORE GENERIC PUR WTR-24PK/16.9 OZ	$77,048,490.46	0	Water
3	**SOFT DRINKS 12/18&15PK CAN CAR**	**COKE CLSC FRIDGE 12PK CAN**	**$76,942,161.95**	**10.99**	**Calorically Sweetened Beverages**
4	FLUID MILK/WHITE ONLY	STORE GENERIC SKIM-PLAS	$69,424,751.49	4.65	Nonfat or Low Fat or Milk Substitutes
5	FLUID MILK/WHITE ONLY	STORE GENERIC VITAMIN D MILK	$65,382,704.59	4.65	Caloric Beverages with some nutrients
6	SOFT DRINKS 12/18&15PK CAN CAR	DIET COKE FRIDGE 12PK	$60,325,053.36	0	Noncalorically Sweetened Beverages
7	FLUID MILK/WHITE ONLY	STORE GENERIC LWFT MLK 1%	$48,376,285.27	4.65	Nonfat or Low Fat or Milk Substitutes
8	FLUID MILK/WHITE ONLY	STORE GENERIC LOW FAT MILK 2% PLSTC	$42,048,789.35	4.65	Nonfat or Low Fat or Milk Substitutes
9	**SOFT DRINKS 12/18&15PK CAN CAR**	**PEPSI-COLA FRIDGE MATE**	**$29,914,750.88**	**11.55**	**Calorically Sweetened Beverages**
10	**SOFT DRINKS 12/18&15PK CAN CAR**	**DR PEPPER CAN 12PK**	**$25,329,284.87**	**11.27**	**Calorically Sweetened Beverages**

CONCLUSION

I conclude that SSB consumption remains problematic in the U.S. and policies and education should be focused on reducing SSB consumption regardless of SNAP status.

- Results show that SSB purchases differed between SNAP households SNAP transactions, SNAP households non-SNAP transactions and non-SNAP households.
- Non-SNAP households had a larger expenditure on SSBs than SNAP households SNAP transactions and non-SNAP transactions. However, SNAP households SNAP transactions had a larger percentage of SSB expenditures than SNAP households non-SNAP transactions, and non-SNAP households.
- For SNAP households SNAP transactions, SSB items made up the majority of the top ten beverage purchases.

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